Overview of the AFMC Environmental, Safety, and Health (ESH) Cost Analysis Guide

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The AFMC Environmental, Safety, and Health Cost Analysis Guide was prepared as an AFMC discretionary document for use by members of the Environmental, Safety, and Health (ESH), Engineering, and Financial Management Communities that need to identify, treat or use ESH costs in system decision making. Ms. Mary Helen Alverio of the Air Force Space and Missile Systems Center (SMC) served as the Government project director. Mr. Gerald B. Kos served as the program manager for the development of the Guide for the Air Force Space and Missile Systems Center. The web site for the Guide was not available prior to publication of this document, however, it will be available at the conference. The point of contact for questions, comments and suggestions regarding this Guide should be directed to SMC/FMC Ms. Mary Helen Alverio at 310-363-2822. Faxes may be sent to 310-363-3518. Ms. Alverio may also be reached at her Internet address, mary.alverio@losangeles.af.mil. In the event that Ms. Alverio may not be reached, contact Mr. Gerald Kos at 310-615-4552. His Internet address is **Error! Bookmark not defined.**.

This Guide seeks to bring together in one document all ESH cost estimating related requirements and processes. Figure 1, on the following page, shows how the ESH Cost Analysis Guide brings together the ESH related requirements in the ESH specialties, Systems Engineering principles, and Financial Management policies and procedures. The right side of the figure shows some applications of the Guide that support sound decision-making processes for the Single Manager (SM).

The Guide has two primary parts: ESH information and ESH Cost Estimating. Part One, ESH Information, consists of two sections. Section one provides an overview of ESH management information that a cost analyst will need for ESH cost estimating efforts. This involves providing the background history and defining ESH Management and ESH Cost. Section two informs the cost analyst of the major ESH activities, by phase, over the life cycle of a weapon system.

Part Two, ESH Cost Estimating, is also broken into two sections. Section one discusses the basic cost estimating concepts that include ESH cost estimating requirements, objectives, and activities. Section two reviews the cost estimating common processes and their application to ESH cost estimating.

The appendices of this document furnish reference material that is very helpful to personnel recently introduced to ESH cost estimating. Appendices A and B provide the cost analyst samples and examples of program cost estimates (PCEs) and trade studies that incorporate ESH costs within the cost estimating common process illustrated in Part Two. PCE examples are provided for a Delta Launch Vehicle, Fighter Aircraft, Global Positioning System (GPS) space vehicle, Radar Program, and Satellite Communications Terminal. Trade study examples are provided for a Hush House Fire Suppression System, Coating Removal Processes for Helicopter Remanufacture, Canopy Replacement for the F-15E, Replacing Cadmium Plating with IVD Aluminum Coating for Corrosion protection, and CFC-114 Refrigerant Replacement Study. Other key information provided in the appendices includes a glossary of ESH terms and definitions, a summary of ESH related laws and regulations and their impact to the single manager, functional support organizations for the cost analyst, an enhanced ESH Work Breakdown Structure (WBS), cost identifying questions by topic and organization/function, potential ESH cost estimating tools, and a discussion about the potential use of Activity-Based Costing (ABC) / Activity-Based Management (ABM) with ESH cost estimating.

DoD 5000.2-R, AFI 32-7086, DoDD 4210.15, DoDD 4715.1
AFI 91-213, DoDI 6055.1, AFPD 91-2, ESH Evaluation Guide

ESH Directives, Policies & Procedures

DoDI 4715.9, AFFARS 5323.3, USC Title 42, MIL-STD-882
NAS 411, DoDD 6050.1, Tactical ESH Action Guide

Defense Acquisition DeskBook, DoDD 5000.1,
DoDD 5000.2-R (4.3.7)

Systems Engineering Principles

EIA Standard 632, IEEE Standard 1220